Aurora

DXE-CAT-S2L

HDMI HDBaseT CAT Extender with IP Control

SAFETY INSTRUCTIONS

Please review the following safety precautions. If this is the first time using this model, then read this manual before installing or using the product. If the product is not functioning properly, please contact your local dealer or Aurora for further instructions.

⚡ The lightning symbol in the triangle is used to alert you to the presence of dangerous voltage inside the product that may be sufficient to constitute a risk of electric shock to anyone opening the case. It is also used to indicate improper installation or handling of the product that could damage the electrical system in the product or in other equipment attached to the product.

⚠ The exclamation point in the triangle is used to alert you to important operating and maintenance instructions. Failure to follow these instructions could result in injury to you or damage to the product.

⚡ Be careful with electricity:

- **Power outlet**: To prevent electric shock, be sure the electrical plug used on the product power cord matches the electrical outlet used to supply power to the Aurora product. Use only the power adapter and power connection cables designed for this unit.
- **Power cord**: Be sure the power cord is routed so that it will not be stepped on or pinched by heavy items.
- **Lightning**: For protection from lightning or when the product is left unattended for a long period, disconnect it from the power source.
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⚠ Also follow these precautions:

- **Ventilation**: Do not block the ventilation slots if applicable on the product or place any heavy object on top of it.
  Blocking the air flow could cause damage. Arrange components so that air can flow freely. Ensure that there is adequate ventilation if the product is placed in a stand or cabinet. Put the product in a properly ventilated area, away from direct sunlight or any source of heat.
- **Overheating**: Avoid stacking the Aurora product on top of a hot component such as a power amplifier.
- **Risk of Fire**: Do not place unit on top of any easily combustible material, such as carpet or fabric.
- **Proper Connections**: Be sure all cables and equipment are connected to the unit as described in this manual.
- **Object Entry**: To avoid electric shock, never stick anything in the slots on the case or remove the cover.
- **Water Exposure**: To reduce the risk of fire or electric shock, do not expose to rain or moisture.
- **Cleaning**: Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- **ESD**: Handle this unit with proper ESD care. Failure to do so can result in failure.

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interferences received, including interference that may cause undesired operation.

Trademarks
All trademarks in this document are the properties of their respective owners.

TABLE OF CONTENTS

PACKAGE CONTENTS

Please make sure the following items are included within your package. Contact your dealer if any items are missing or damaged.

- DXE-CAT-RX2 x 1
- DXE-CAT-TX2L x 1
- DXE-CAT-E1 Wall / Desk Mount Ears x 4
- 24V DC Power Adapter x 1

Optional Accessories

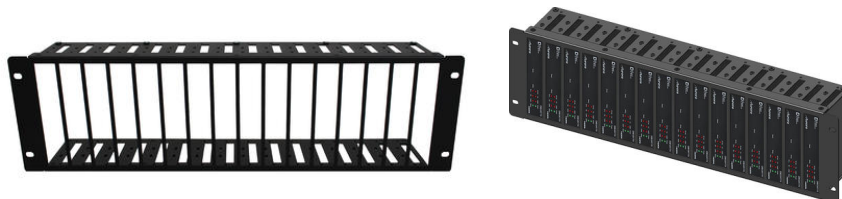- IR Receiver CA0026-1

- IR Emitter CA0012-1

- IR Blaster CA0049-1

- RS-232 Adaptor (3.5mm TRS to FEMALE DB9 2-TX 3-RX) CA0052-F2T3R
- RS-232 Adaptor (3.5mm TRS to FEMALE DB9 3-TX 2-RX) CA0052-F3T2R
- RS-232 Adaptor (3.5mm TRS to MALE DB9 2-TX 3-RX) CA0052-M2T3R
- RS-232 Adaptor (3.5mm TRS to MALE DB9 3-TX 2-RX) CA0052-M3T2R

- Rack Mount 3RU (Holds 16 units) DXE-CAT-RK3 (Blanks available DXE-CAT-RK3B)

Note: Go to www.auroramultimedia.com for latest manual and firmware

INTRODUCTION

About

The DXE-CAT-S2L is part of the growing Digital Xtreme Series. This product is different than the typical CAT extender found on the market today as it not only breaks the price barrier but the feature and usability aspects as well. All connectors are on one side to make wiring cleaner and rack mounting easier. Having the ability to power the device with the choice of transmit or receive reduces the installation time and keeps things neat. An industry first is Aurora's exclusive Flex-Power^{TM} Power-Over-Ethernet circuit (Patents Pending), which allows both the transmitter and receiver to be powered without the need of any wall supplies.

The DXE-CAT-S2L is also unique as it combines IP control with an extender. Normally extenders simply pass the RS-232 and IR from one device to the other, however, the DXE-CAT-S2L can target a local or far end port via TCP, RPC, or Telnet commands from any control system or PC on the market. It also has the ability to serve up web pages via the LAN port to any device with a web browser.

Being able to go the distance is important too, and HDBaseT technology helps achieve that. With a single CAT cable, the DXE-CAT can go up to 330ft 1080p 60Hz 48bit color depth, 500ft 1080p 60Hz 24bit (CAT 6), or 600ft 1080p 60Hz 24bit (CAT 6A Shielded) depending on model. In addition, the RS-232, IR, & LAN can be sent over the same cable bi-directionally.

Features

◆ **Transmit HDMI up to 1080p 60Hz 48bit 330ft over one CAT 5e/6/7 cable**

◆ **Transmit HDMI up to 1080p 60Hz 24bit 500ft over one CAT 6 cable**

◆ **Transmit HDMI up to 1080p 60Hz 24bit 600ft over one CAT 6A Shielded cable**

◆ **Supports 4K x 2K & HDMI 3D**

◆ **HDCP Compliant**

◆ **IP Control System (32 bit) / Web Server with 8MB of Storage**

◆ **All connectors on one side for easier installation**

◆ **Bi-directional RS-232 & IR & LAN**

◆ **Power both units from TX or RX side with wall power supply (HDBaseT POE)**

◆ **LAN POE (Power-Over-Ethernet) can power both TX & RX without wall supplies (*Patents Pending)***

◆ **Status LED for all connections on front**

◆ **Various mounting options**

Front & Rear Panel DXE-CAT-TX2L

Front LED Indicators

- IR Out – Blinks when emitting IR to device from IR Port. It is normal to be lit if nothing is plug into IR port.
- IR In – Blinks when receiving IR from IR port. It is normal to be lit if nothing is plug into IR port.
- TX – RS-232 Transmit. Blinking rate and intensity will vary with baud rate.
- RX – RS-232 Receive. Blinking rate and intensity will vary with baud rate.
- HDBT – Lights when HDBaseT RJ-45 has proper connection between an RX/TX pair. Blinks when in sleep mode.
- HDMI – Will light solid if HDMI is plugged in on both RX/TX and HDCP is present. If no HDCP LED will blink.
- POWER – Lights green when power is present.
- STATUS – Will blink steady if unit is working properly.

Front Pin-hole buttons

- Reset – Use paper clip or similar object to reset unit by pushing into hole.
- Setup – Press and hold for 3 seconds to restore factory defaults. (refer to IP settings section).

Rear Connections

- 24V DC – Power connector for 15 watt 24VDC power supply. Note only 1 supply is required to power both units. Either side can send power to the other unit. Note if LAN POE is utilized the 24VDC supply is not required.
- IR – Plug the IR receiver or emitter into this port. It will auto detect the mode of operation required.
- RS-232 – Connect RS-232 device up to 115k baud.
- HDBaseT – Connect CAT 5e/6/7 cable. Shield cable is not necessary unless the environment has a lot of electrically noise.
- HDMI Input – Plug HDMI cable from source device like a BluRay player. Note the HDMI cable should be rated for the bandwidth you are using.
- LAN1/2 – 10/100 LAN connection. LAN1 can use POE from a POE switch to power both the RX and TX units. Note: HDBaseT can only transmit 10T from the LAN.

Note: Some POE switch do not supply the full 15.4watts per port. Verify the total power rating of the switch. It should be at least 15.4W x (number of ports).

Front & Rear Panel DXE-CAT-RX2

Front LED Indicators

- IR Out – Blinks when emitting IR to device from IR Port. It is normal to be lit if nothing is plug into IR port.
- IR In – Blinks when receiving IR from IR port. It is normal to be lit if nothing is plug into IR port.
- TX – RS-232 Transmit. Blinking rate and intensity will vary with baud rate.
- RX – RS-232 Receive. Blinking rate and intensity will vary with baud rate.
- HDBT – Lights when HDBaseT RJ-45 has proper connection between an RX/TX pair. Blinks when in sleep mode.
- HDMI – Will light solid if HDMI is plugged in on both RX/TX and HDCP is present. If no HDCP LED will blink.
- POWER – Lights green when power is present.
- STATUS – Will blink steady if unit is working properly.

Front Pin-hole buttons

- Reset – Use paper clip or similar object to reset unit by pushing into hole.
- Setup – For DXE-CAT-TX2L model only. Not used for DXE-CAT-RX2.

Rear Connections

- 24V DC – Power connector for 15 watt 24VDC power supply. Note only 1 supply is required to power both units. Either side can send power to the other unit. Note if LAN POE is utilized the 24VDC supply is not required.
- IR – Plug IR receiver or emitter into this port. It will auto detect the mode of operation required.
- RS-232 – Connect RS-232 device up to 115k baud.
- HDBaseT – Connect CAT 5e/6/7 cable. Shield cable is not necessary unless the environment has a lot of electrically noise.
- HDMI Output – Plug HDMI cable from destination device like an LCD display. Note the HDMI cable should be rated for the bandwidth you are using.
- LAN1/2 – 10/100 LAN connection. LAN1 can use POE from a POE switch to power both the RX and TX units. Note: HDBaseT can only transmit 10T from the LAN. These ports are a switch. Only 1 LAN port should be connected to another switch.

Note: Some POE switch do not supply the full 15.4watts per port. Verify the total power rating of the switch. It should be at least 15.4W x (number of ports).
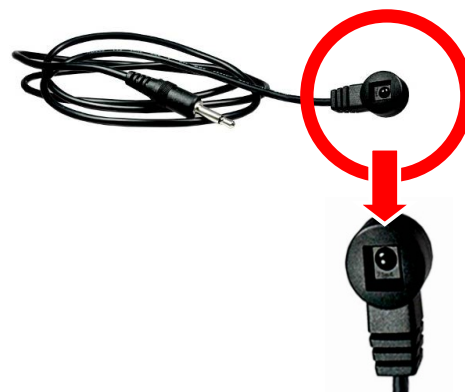
IR EXTENDERS

IR Blaster

IR Receiver

IR Connections

The DXE-CAT Series has the ability to auto detect on the IR port if a receiver or a blaster / emitter is connected.

IR Blaster / Emitter: Plug in an IR blaster to emit all IR command signals received from the IR receiver to control the associated devices with built-in IR sensor

IR Receiver: Plug in an IR receiver to receive all IR command signals from the IR remote controls of the associated devices. Note if you are not using an approved Aurora branded receiver make certain you do not exceed the 5v signal level limitation as some devices use 12v. Failure to do so will result in damage.

When the DXE-CAT-TX2L is set for manual the only way to send IR commands is using IR files loaded on the ftp of the unit in the IR directory. Aurora IR files (.wir) are available for download on the Aurora website. In addition, IR files learned from NX or QX control devices can be utilized.

IR Jack Pinout

IR Blaster

IR Receiver

1 = IR signal
2 = Grounding

1= IR signal (38KHz)
2= Power
3= Grounding
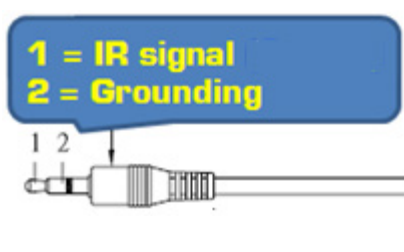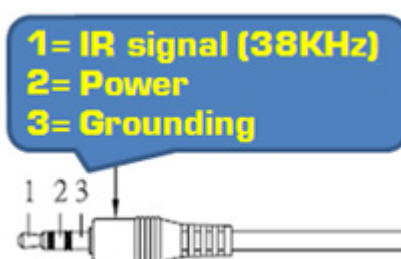
Emitters must be mono plug or have ring and sleeve tied to ground.
Receivers must be stereo plug. Ring is 5v power. If using another brand receiver, note carrier frequency must be stripped and IR signal cannot exceed 5v or damage to port may occur.
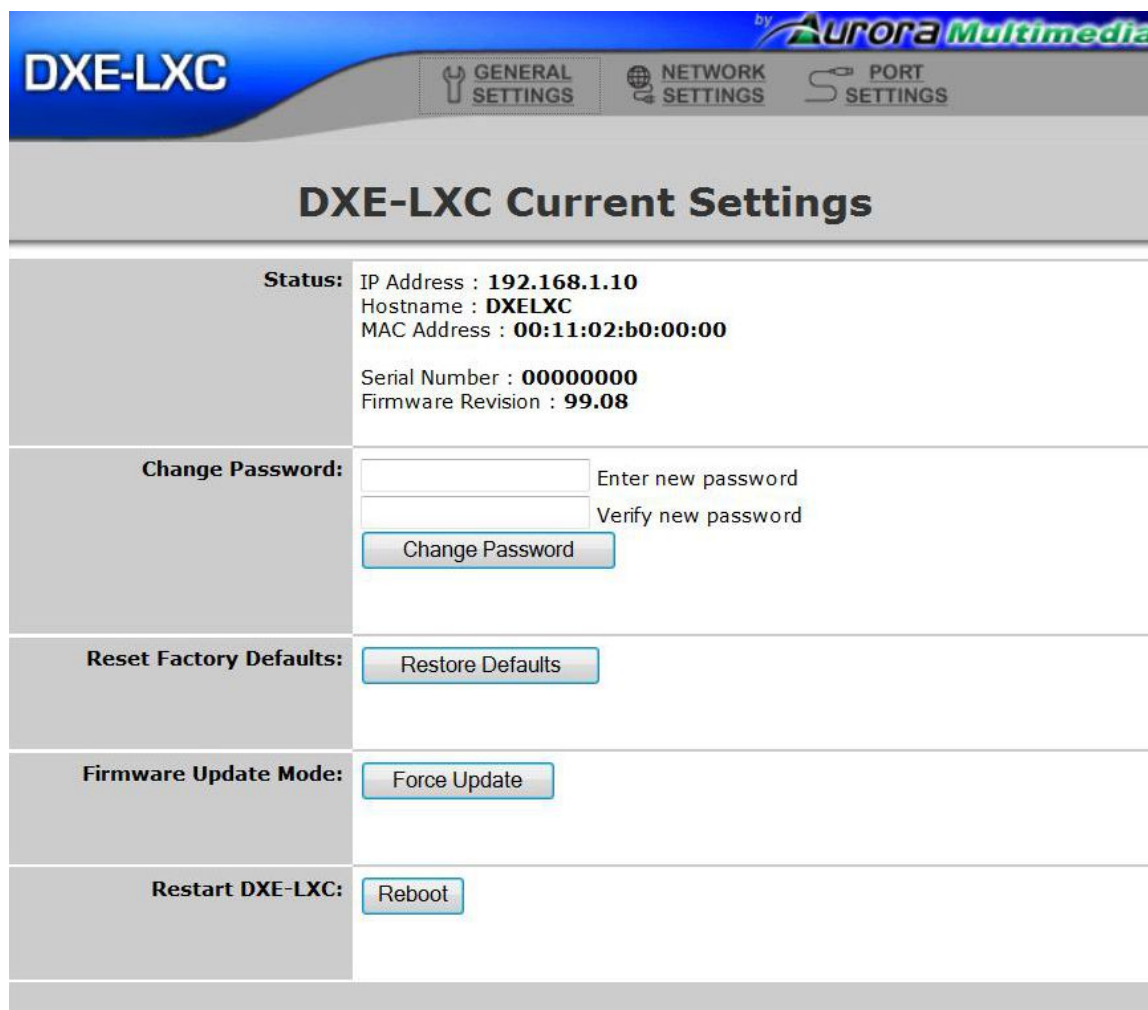
IP Setup

Default IP

The default IP out of the box is 192.168.1.10 static. Make certain to change the IP on the unit at a time or you will get collisions on the network. Each device must have a unique IP address. DHCP can be used but it is recommended to issue IP address based on the MAC address. This assures the DHCP does not reassign the IP address at a later time causing issues. Keep in mind the processor is on the TX unit so only the TX needs to be connected when you are doing the initial setup although having the RX will not affect the process and may be necessary only if the LAN is connected at the RX side.

To access the settings via web browser use the units IP address/setup (ex. 192.168.1.10/setup) The default user name is admin and the default password is admin.

In the event you lose your settings press and hold the setup button on the DXE-CAT-TX2L for 3 seconds. This will restore the unit back to factory default.

General Settings

Status - Shows the current IP Address, Hostname, Mac Address, Serial number, and the firmware revision.

Change Password – The default password is admin. It is recommend to change the password for better security on the network especially if it is not private.

Reset Factory Defaults – Once pressed a confirm screen will appear. Once confirmed the unit will restore the default IP address and password.

Firmware Update Mode – This but forces the unit into an update mode. It is recommended to use the firmware update tool LXupdate which is available on the Aurora website.

Restart DXE-LXC – Remotely reboots the unit.

Network Settings

Current Network Settings - Shows the current IP Address, Subnet Mask, Gateway, Hostname, and Mac Address.

Network Configuration – This section allows the turning on/off of the DHCP and allowing the entry of static IP settings if DHCP is not utilized. If you use DHCP it is always recommended to use a switch that can map the MAC address to a defined IP address otherwise the IP address may change inadvertently at a later time making it difficult to target the device. Hostname can only be utilized on a NETBIOS system. If TCP commands are used there is a setting for the TCP server port number. Make certain once done making changes to press apply changes.

Port Settings

Master Remote IP – Enter the Aurora control system IP the DXE-LXC is going to push information to.
Note: If an Aurora control system is not used RPC, Telnet, or TCP is available.

Local Serial Port 1 Settings – Baud Rate, Date Size, Parity, and Stop bits are selected for the TX RS-232 port.

Remote Serial Port 2 Settings – Baud Rate, Date Size, Parity, and Stop bits are selected for the RX RS-232 port.

Port Processing Session – Choose between the following modes of operation.

      Manual - Ports are just serial ports manipulated via RPC / Telnet / TCP commands.

      Push to Variable - RX data is pushed via Aurora RPC to given Master Remote IP.

      Push to Port - RX data is pushed to given IP remote serial port via Aurora RPC.

      Telnet Client - Unit will attempt to connect to given server IP and pass and receive serial port data.

      Telnet Server - Unit will wait for external connection to pass and receive serial port data.

      Pass-Through - Unit's (TX/RX) serial ports are linked so any serial RX data will come out the TX on the other serial port.

Test Serial Transmit – Enter a serial string to send out the RS-232 port for testing of connecting device.

IR Ports – Selecting the activate IR repeater mode enables the transfer of the IR ports signals to and from the TX and RX units. If it is not selected only RPC / Telnet / TCP commands will trigger the IR ports locally or remotely. IR files are stored on the ftp of the DXE-CAT-TX2L unit in the IR folder.

Port Settings (Manual)

With port processing session set to manual there will be no additional selections as the system is set to trigger the functionality with IP commands. Ports will not pass data from the TX to RX and vice versa in this mode.

Port Settings (Push to Variable)

Remote Session IP Address – Enter the IP address the variable is to be sent to an Aurora control device. Note the IP address overrides the Master Remote IP address.

Target RPC Variable Name – Enter the variable utilized by the remote control processor.

Port Settings (Telnet Server)

Telnet Local Port Number – Defaulted to Port 23 but can be changed to other port numbers.

Telnet Timeout Seconds – Defaulted to no timeout but can be set to timeout and close the connection.

Telnet Protocol – Default is Telnet otherwise it can be set to none which is used for TCP.

Port Settings (Telnet Client)

Remote Session IP Address – Enter Telnet Server IP Address.
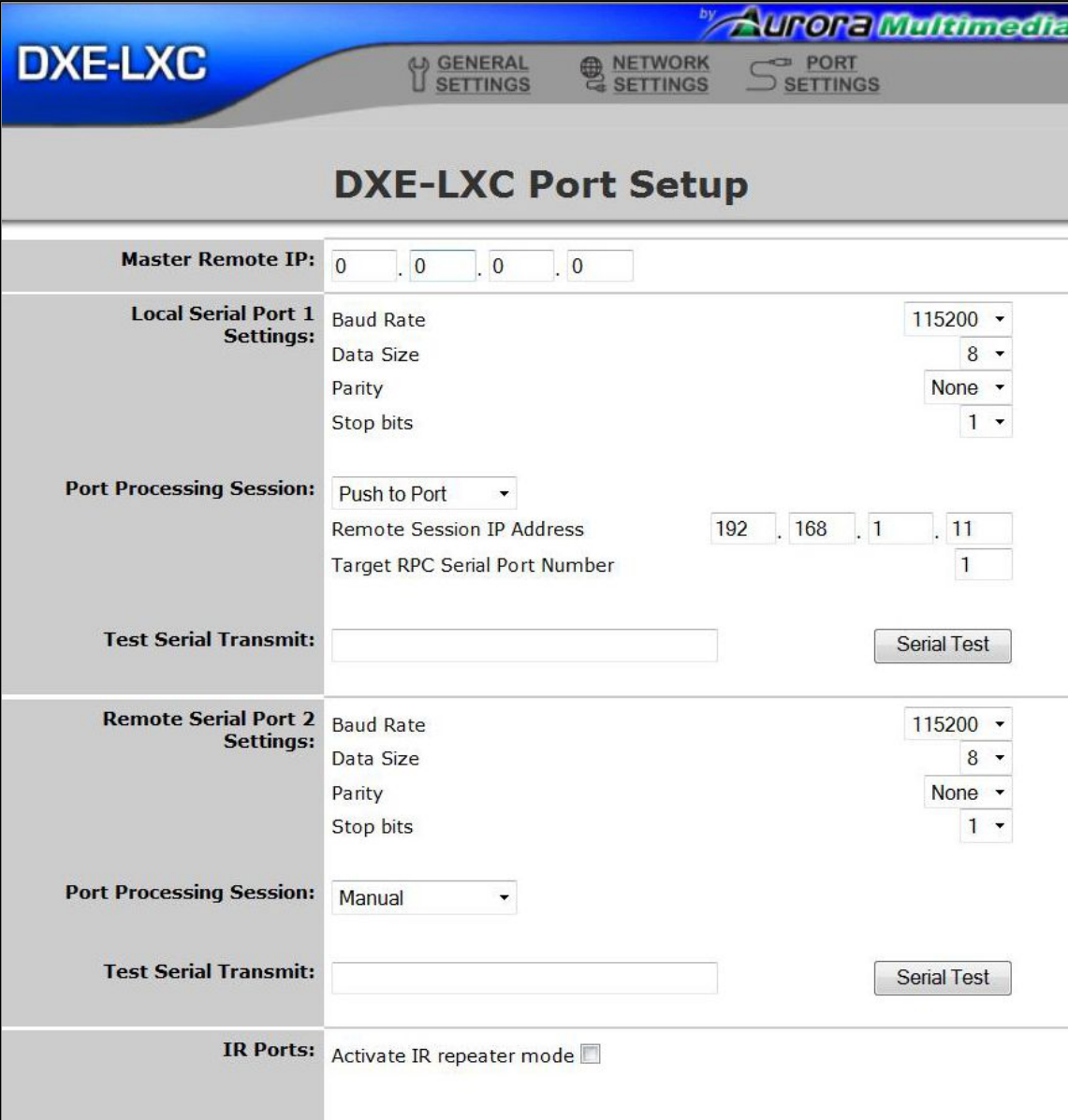
Telnet Remote Port Number – Defaulted to Port 23 but can be changed to other port numbers.

Telnet Local Port Number – Defaulted to Port 23 but can be changed to other port numbers.

Telnet Timeout Seconds – Defaulted to no timeout but can be set to timeout and close the connection.

Telnet Protocol – Default is Telnet otherwise it can be set to none which is used for TCP.

Port Settings (Push to Port)

Remote Session IP Address – Enter IP address of serial port on another Aurora control device to target. This will forward the serial data to any Aurora control system product. It overrides the master Remote IP.

Target RPC Serial Port Number – Enter the serial port number of the Aurora control device.

Port Settings (Pass-Through)

Pass-Through mode allows the serial ports on both the DXE-CAT-TX and DXE-CAT-RX to become a virtual cable link. The serial receive of one unit will be sent to the serial transmit of the other unit. IP commands will still force serial strings out the local or remote ports when necessary.

IP Commands

TCP/RPC Commands

Remote procedure calls (RPCs) are used to control the DXE-CAT-S2L from any device with a web browser (PC, iPad, touch panel, etc.), an external control system, or another web-enabled device.   RPCs can be used to send serial and IR commands, receive serial data, and retrieve system information.

RPCs can be sent in the form of an HTTP POST (used for web based control pages or control from a Aurora WACI series controller) or TCP commands (used for control from an external control system). Calls to the RPC server using HTTP POST are done through the /rpc virtual directory, e.g. http://ip-address/rpc. Use this directory as part of the URL when creating the address for the HTTP POST transaction.   TCP commands are structured the same way as the HTTP POST, but sent over a raw TCP connection without any HTTP headers.

Command	Description
GetFirmwareVersion ( )	Returns the firmware version
GetSerialNumber ( )	Returns the serial number
Net_GetIPAddress ( )	Returns the IP address
Net_GetSubnetMask ( )	Returns the subnet mask
Net_GetNetCardCount ( )	Returns the number of network ports on the unit
Serial_GetSettings (Port)	Returns the settings of a specific serial port [1]
Serial_Send (Port, Msg, MaxWaitMS)	Sends a serial command to a specific port [1,2] MaxWaitMS = The number of milliseconds allowed to complete the sending of the serial data before timing out
GetWebFileNames ( )	Returns the names of the web files
GetIRFileNames ( )	Returns the names of the IR files
Serial_Read (Port)	Reads the serial buffer for a specific serial port [1,2]
Serial_ClearReadBuffer (Port)	Clears the serial buffer for a specific port [1]
Serial_ReadBufferCount (Port)	Reads the buffer count for a specific port [1]
Serial_GetPortCount ( )	Returns the total number of available serial ports (2) [1]
IR_GetPortCount ( )	Returns the total number of available IR ports (2) [1]
IR_SendCommand (Port, Group, Command)	Sends an IR command from the specified port [1] Group = The IR file name Command = The IR command name
IR_ListAllGroups ( )	Returns all loaded IR groups (files)
IR_ListAllCommandsInGroup (Group)	Returns all IR commands in a specific group
GetMachineType ( )	Returns the ID of the DXE-CAT-S2L controller (used for communication with other Aurora controllers)
SetDefaultConfig ( )	Resets the DXE-CAT-S2L settings to factory default

[1] *Serial port 1 / IR port 1 is located on the DXE-CAT-S2L TX unit, serial port 2 / IR port 2 is located on the RX unit*

[2] *Hexadecimal data is represented with a percent sign preceding the 2-byte hex code (e.g. %0D for carriage return)*

TCP/RPC Command Usage

Sample Usage

Send the serial command "PowerOn<0D>" out the RX serial port:

method=Serial_Send&param1=2&param2=PowerOn%0D&param3=100

Send the 'Play' command to a DVD player on the DXE-CAT-S2L TX side:

method=IR_SendCommand&param1=1&param2=DVD&param3=Play

Retrieve a list of all IR file names:

method=GetIRFileNames

Response Tokens

status - 0 for Failure, 1 for Success

faultCode - If status is 0 (failure), faultCode will be an integer representing a specific error. This token is NOT returned if status is 1 (success).

response[*i*] - Returned value #*i*, where *i* is an integer. If status is 0 (fail), the value for response1 will be a string describing the failure, and the value for **b** will be a debug string giving more information about the failure.

Example using the call for the Net_GetSubnetMask method:

method=Net_GetSubnetMask

Sample response:

status=1&response1=255.255.255.0

Web Server

The DXE-CAT-TX2L has a built in web server that can hold up to 8MB of web pages (including firmware). Using FTP, webpage(s) can be uploaded to the wwwpub directory. Web pages utilizing HTML, Flash, AJAX, etc., can be served up using the units IP address or host name (if NetBIOS is used). Aurora has a free tool called YIPI available for download on the Aurora website to create webpages quick and easily. YIPI also has the ability to FTP to the unit as well.

Please note that only the YIPI HTML export will work with the DXE-CAT-TX2L. The Flash export from YIPI will only work with NX or QX series at this time.

CONNECTOR PIN DEFINITION

HDMI
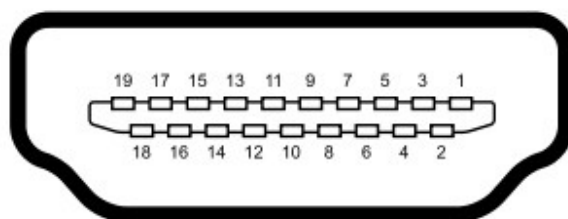
Type A (Receptacle) HDMI

Pin 1	TMDS Data2+	Pin 8	TMDS Data0 Shield	Pin 15	SCL
Pin 2	TMDS Data2 Shield	Pin 9	TMDS Data0–	Pin 16	SDA
Pin 3	TMDS Data2–	Pin 10	TMDS Clock+	Pin 17	DDC/CEC Ground
Pin 4	TMDS Data1+	Pin 11	TMDS Clock Shield	Pin 18	+5 V Power
Pin 5	TMDS Data1 Shield	Pin 12	TMDS Clock–	Pin 19	Hot Plug Detect
Pin 6	TMDS Data1–	Pin 13	CEC		
Pin 7	TMDS Data0+	Pin 14	Reserved (N.C. on device)		

CAT5e/6/7

T568A and T568B Wiring

Pin	T568A Pair	T568B Pair	Wire	T568A Color	T568B Color	Pins on plug face (socket is reversed)
1	3	2	tip	white/green stripe	white/orange stripe	
2	3	2	ring	green solid	orange solid	
3	2	3	tip	white/orange stripe	white/green stripe	
4	1	1	ring	blue solid	blue solid	
5	1	1	tip	white/blue stripe	white/blue stripe	
6	2	3	ring	orange solid	green solid	
7	4	4	tip	white/brown stripe	white/brown stripe	
8	4	4	ring	brown solid	brown solid	

APPENDIX 1   Troubleshooting

Problem	Solution
1. No Video Signal.	a. Check that the power plug is properly inserted into a functioning power outlet. b. Make certain source is on. c. Verify pin-out of connector at each end. d. If used in electrical noisy environment shielded CAT cable may be required.
2. LED is not lit	a. Check 24v power supply is plugged in. b. Check to see if Wall supply is plugged into wall outlet. c. Make certain wall outlet has power.
3. LAN POE not working	a. Verify the POE switch total power is adequate. Some POE switch power ratings cannot supply the full 15.4 watts per port. Make certain to multiply the amount of ports by 15.4watts and compare to the switches total spec.
4. IR not working	a. Verify using proper emitter or receiver to specifications outlined. Use Aurora branded accessories for best results.
5. DXE-CAT-RX is very warm	a. This is normal. HDBaseT receivers do run very warm when signal is applied. You will note the transmitter runs much cooler.
6. IR port on RX side does not work with some devices	a. The IR on the RX side is limited to 38kHz so only remotes with 38kHz carrier will work. Keep in mind some remotes between 36kHz-40kHz may work. The TX side which is local to the processor will work with carrier frequencies from 30kHz to 100kHz.
7. Need to update firmware	a. Use LXupdate found on the Aurora website.
8. Cannot ping IP address	a. Make certain only 1 LAN port is connected to same switcher. The DXE-CAT LAN ports are a switch not a router.

1. All transmission distances are measured using Belden 1583A CAT5e 125MHz Solid UTP cable. The transmission distance is defined as the distance between the video source and the display.

2. To reduce the interference among the unshielded twisted pairs of wires in UTP cable, you can use shielded STP cables to improve EMI problems, which is worsen in long transmission.

Warning: Do not plug RJ-45 HDBaseT output to non-HDBaseT complaint devices or damage may occur to either product.

APPENDIX 2   Firmware Update

LXupdate.exe is a Windows Command Line tool to field upgrade LX class products

usage: LXupdate filename targetIP

filename is the name of the file containing the image to upload

targetIP is IP address of target in ddd.ddd.ddd.ddd format

The tool uses UDP port 9 or port 49444 to force targeted devices into programming mode.   When these are not available the force button on the main page of the LX device interface must be used.

UDP Ports   67, 68, and 69 are also required.

APPENDIX 3 Technical Specifications

Model Name	DXE-CAT
Technical	**DXE-CAT-S2L**
Distance	330ft (1080p 60Hz / 4k2k 48bit color CAT 5e/6/7) 500ft (1080p 60Hz 24bit CAT 6) 600ft (1080p 60Hz 24bit CAT 6A)
Max Resolution	1080p 60Hz 1920 x 1200 4k x 2k
Color Depth	48bit
RS-232	Max 115kbps
IR Carrier Freq. TX / RX	30kHz – 100kHz / 38kHz
LAN	2 - 10/100
LAN POE	Port 1
HDMI	3D, HDCP Compliant
Front LED Status	Power, Status, HDMI, HDBaseT, RS-232 TX/RX, IR In/Out
Front Selections	Reset
LAN Connectors	Dual 8P8C with 2 LED indicators each
HDBaseT Connector	RJ-45 WE/SS 8P8C
RS-232 Connector	3.5mm TRS **TX- TIP, RX- Ring, GND- Sleeve**
IR Connector	3.5mm TRS (Auto Sensing Direction for Blaster or Receiver) **Signal- TIP, 5V- Ring, GND- Sleeve**
HDMI Connector	Type A 19 pin
Power Connector	Diameter1.7mm ID, 4mm OD (EIAJ-2)
Mechanical	**DXE-CAT**
Housing	Black Aluminum enclosure
Dimensions [L x W x H]	120mm x 77mm x 27.94mm [4.72" x 3.03" x 1.1"]
Weight	395g [14 oz] TX / 395g [14 oz] RX
Mounting	Wall-mounting & Rack Mounting
Power supply	24 .65A DC (Only 1 required on either TX or RX)
Power consumption	5 Watts (TX) 6 Watts (Rx) [max]
Operation temperature	0~40°C [32~104°F]
Storage temperature	-20~60°C [-4~140°F]
Relative humidity	20~90% RH [no condensation]
Package Contents	1x DXE-CAT-T(x) (x= 1, 2, 2L accordingly) 1x DXE-CAT-R(x) (x= 1, 2 accordingly) 1x 24V DC 15Watt Wall Supply 4 x Wall / Desk Mount Ears (DXE-CAT-E1) 1x User Manual
Options	IR Receiver 38KHz (CA0026-1) IR Emitter (CA0012-1)

Specifications subject to change without notice.

APPENDIX 4   Warranty

Limited 3 Year Warranty

Aurora Multimedia Corp. ("Manufacturer") warrants that this product is free of defects in both materials and workmanship for a period of 3 years as defined herein for parts and labor from date of purchase. This Limited Warranty covers products purchased in the year of 2009 and after. Motorized mechanical parts (Hard Drives, DVD, etc), mechanical parts (buttons, doors, etc), remotes and cables are covered for a period of 1 year. Touch screen displays are covered for 1 year; touch screen overlay components are covered for 90 days. Supplied batteries are not covered by this warranty. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with same or similar model) at our option without charge for parts or labor for the specified product lifetime warranty period.

This warranty shall not apply if any of the following:

A. The product has been damaged by negligence, accident, lightning, water, act-of-God or mishandling; or,

B. The product has not been operated in accordance with procedures specified in operating instructions: or,

C. The product has been repaired and or altered by other than manufacturer or authorized service center; or,

D. The product's original serial number has been modified or removed: or,

E. External equipment other than supplied by manufacturer, in determination of manufacturer, shall have affected the performance, safety or reliability of the product.

F. Part(s) are no longer available for product.

In the event that the product needs repair or replacement during the specified warranty period, product should be shipped back to Manufacturer at Purchaser's expense. Repaired or replaced product shall be returned to Purchaser by standard shipping methods at Manufacturer's discretion. Express shipping will be at the expense of the Purchaser. If Purchaser resides outside the contiguous US, return shipping shall be at Purchaser's expense.

No other warranty, express or implied other than Manufacturer's shall apply.

Manufacturer does not assume any responsibility for consequential damages, expenses or loss of revenue or property, inconvenience or interruption in operation experienced by the customer due to a malfunction of the purchased equipment. No warranty service performed on any product shall extend the applicable warranty period. This warranty does not cover damage to the equipment during shipping and Manufacturer assumes no responsibility for such damage.

Aurora Multimedia Corp.

205 Commercial Court

Morganville, NJ 07751

Phone: 732-591-5800   Fax: 732-591-6801